AMENDMENTS TO THE CLAIMS

1. (CURRENTLY AMENDED) An apparatus comprising:

a first circuit configured to acquire a current picture, a first reference picture and a second reference picture;

a second circuit configured to generate a measurement of inter-picture motion between said current picture and said first reference picture by performing a global motion estimation process on said current picture and said first reference picture;

a ~~first~~ third circuit configured to generate a control signal in response to (i) ~~a~~ said measurement of inter-picture motion between ~~a~~ said current picture and ~~a~~ said first reference picture and (ii) a predetermined threshold value; ~~and~~

a ~~second~~ fourth circuit configured to select either said first reference picture or ~~a~~ said second reference picture as a better reference picture for subsequent motion estimation and motion compensation on said current picture in response to said control signal; and

a motion estimation circuit configured to generate one or more motion vectors in response to said better reference picture and said current picture, wherein said current picture is encoded based upon said one or more motion vectors.

2. (ORIGINAL) The apparatus according to claim 1, wherein:

a parity of said first reference picture is opposite to a parity of said current picture; and

a parity of said second reference picture is the same as said parity of said current picture.

3. (ORIGINAL) The apparatus according to claim 1, wherein:

a parity of said first reference picture is the same as a parity of said current picture; and

a parity of said second reference picture is opposite to said parity of said current picture.

4. (ORIGINAL) The apparatus according to claim 1, further comprising:

a memory configured to store said current picture, said first reference picture and said second reference picture.

5. (CURRENTLY AMENDED) The apparatus according to claim 1, wherein said ~~second~~ fourth circuit further comprises:

a multiplexer circuit configured to select ~~either~~ (i) said first reference picture ~~or~~ for presentation as said better reference picture in response to a first state of said control

signal and (ii) said second reference picture for presentation ~~to a motion estimation circuit based upon a~~ as said better reference picture in response to a second state of said control signal.

6. (CANCELLED).

7. (CURRENTLY AMENDED) The apparatus according to claim 1, wherein said ~~first~~ second circuit further comprises:

a low-complexity motion estimation circuit configured to generate a plurality of coarse motion vectors for said current picture based upon a low-resolution inter-picture motion search of said first reference picture.

8. (CURRENTLY AMENDED) The apparatus according to claim 7, wherein said ~~first~~ second circuit further comprises:

a first analysis circuit configured to determine a dominant global motion component based upon said coarse motion vectors and generate said measurement of inter-picture motion in response to said ~~coarse~~ dominant global motion ~~vectors~~ component.

9. (CURRENTLY AMENDED) The apparatus according to claim 8, wherein said ~~first~~ second circuit further comprises:

a second analysis circuit configured to generate said control signal ~~in response to said measurement of inter-picture~~

~~motion~~ based upon a fraction of said coarse motion vectors contained in a cluster associated with said dominant global motion component and said predetermined threshold value.

10. (ORIGINAL) The apparatus according to claim 8, wherein:

said first analysis circuit is configured to perform a cluster analysis on said coarse motion vectors.

11. (ORIGINAL) The apparatus according to claim 1, wherein said apparatus is part of an encoder circuit.

12. (CURRENTLY AMENDED) An apparatus comprising:

means for acquiring a current picture, a first reference picture and a second reference picture;

means for generating a measurement of inter-picture motion between said current picture and said first reference picture by performing a global motion estimation process on said current picture and said first reference picture;

means for generating a control signal in response to (i) ~~a~~ said measurement of inter-picture motion between ~~a~~ said current picture and ~~a~~ said first reference picture and (ii) a predetermined threshold value; ~~and~~

means for selecting either said first reference picture

or ~~a~~ said second reference picture as a better reference picture for subsequent motion estimation and motion compensation on said current picture in response to said control signal; and

means for generating one or more motion vectors in response to said better reference picture and said current picture, wherein said current picture is encoded based upon said one or more motion vectors.

13. (CURRENTLY AMENDED) A method for performing motion estimation in a video encoder comprising the steps of:

acquiring a current picture, a first reference picture and a second reference picture;

generating a measurement of inter-picture motion between said current picture and said first reference picture by performing a global motion estimation process on said current picture and said first reference picture;

generating a control signal in response to (i) ~~a~~ said measurement of inter-picture motion between ~~a~~ said current picture and ~~a~~ said first reference picture and (ii) a predetermined threshold value; ~~and~~

selecting either said first reference picture or ~~a~~ said second reference picture as a better reference picture for subsequent motion estimation and motion compensation on said current picture in response to said control signal; and

generating one or more motion vectors in response to said better reference picture and said current picture, wherein said current picture is encoded based upon said one or more motion vectors.

14. (ORIGINAL) The method according to claim 13, wherein:

a parity of said first reference picture is opposite to a parity of said current picture; and

a parity of said second reference picture is the same as said parity of said current picture.

15. (ORIGINAL) The method according to claim 13, wherein:

a parity of said first reference picture is the same as a parity of said current picture; and

a parity of said second reference picture is opposite to said parity of said current picture.

16. (ORIGINAL) The method according to claim 13, further comprising the step of:

storing said current picture, said first reference picture and said second reference picture in a picture memory.

17. (CURRENTLY AMENDED) The method according to claim ~~13~~ 19, further comprising the step of:

generating ~~one or more~~ said control signal based upon a fraction of said coarse motion vectors ~~in response to said better reference picture~~ contained in a cluster associated with said dominant global motion component and said ~~current picture~~ predetermined threshold value.

18. (CURRENTLY AMENDED) The method according to claim 13, further comprising the step of:

generating a plurality of coarse motion vectors for said current picture based upon a low-resolution inter-picture motion search of said first reference picture.

19. (CURRENTLY AMENDED) The method according to claim 18, further comprising the ~~step~~ steps of:

determining a dominant global motion component based upon said coarse motion vectors; and

generating said measurement of inter-picture motion in response to said ~~coarse motion vectors~~ dominant global motion component.

20. (PREVIOUSLY PRESENTED) The method according to claim 19, further comprising the step of:

generating said control signal having (i) a first state in response to said measurement of inter-picture motion exceeding said predetermined threshold value and (ii) a second state in response to said measurement of inter-picture motion not exceeding said predetermined threshold value.

21. (ORIGINAL) The method according to claim 19, further comprising:

performing a cluster analysis on said coarse motion vectors.

22. (ORIGINAL) The method according to claim 13, wherein said current picture, said first reference picture and said second reference picture each comprise a field picture.

23. (PREVIOUSLY PRESENTED) The method according to claim 13, wherein said predetermined threshold value is programmable.

24. (NEW) The apparatus according to claim 1, wherein said first reference picture comprises a temporally closest reference picture to said current picture.